Region 2 Enforcement & Compliance Assurance Division
Air Compliance Branch

CAA Inspection Report

Inspection Date:	8/9/2022
Facility Name:	Burlington County Resource and Recovery Complex (BCRRC)
Facility Address:	2098 Burlington Columbus Rd, Bordentown, NJ 08505
ICIS-Air ID #:	NJ0000003400545317
Facility Contact:	Jerome Sheehan, Director of Solid Waste, jsheehan@co.burlington.nj.us, 609-499-1001
EPA Lead Inspector:	Victor Tu, Environmental Engineer, ECAD/ACB, 212-637-3476
EPA Asst. Inspector:	Phillip Ritz, Environmental Scientist, ECAD/ACB, 212-637-4064
State Inspector(s):	State inspector name, title, phone number.
Other Inspector(s):	Omer Sohail, EPA Environmental Engineer, LSASD -MAB, 732-321-4461
Other Inspector(s):	Supriya Rao, EPA Environmental Engineer, LSASD-MAB, 732-321-3622
Other Inspector(s):	Harish Patel, Team leader, ECAD/ACB, 212-637-4046

Background

The County owns the Burlington County Resource Recovery Complex ("BCRRC") in Florence and Mansfield Townships, New Jersey. The current operator of the site is Waste Management. The Complex is the site of all solid waste processing and disposal activities undertaken by the County pursuant to directives of the New Jersey Solid Waste Management Act. Solid waste from all of the County's forty municipalities is accepted at this facility. The 522-acre tract was selected in 1981 as the site for the Complex which commenced operation in 1989. Current projections anticipate that the Complex will meet the disposal needs of Burlington County until 2027.

Pertinent Regulatory Requirements

Burlington County Resource and Recovery Complex is subject 40 CFR 60 Subpart XXX –MSW Landfill Regulations, 40 CFR 63 Subpart AAAA –Landfill MACT and has a Title V Operating permit issued by NJDEP.

Summary of Observations

List of Attendees

Jerome Sheehan, Director of Solid Waste –Burlington County LF
Joseph Hilla, Site Supervisor –Burlington County LF

Laurie E. Van Genderen, District Solid Waste Coordinator –Burlington County LF
Eric Peterson, Project Director –SCS Engineers
Victor Tu –EPA Environmental Engineer
Phil Ritz –EPA Environmental Engineer
Harish Patel –EPA Environmental Engineer
Omer Sohail –EPA Environmental Engineer
Supriya Rao –EPA Environmental Engineer

Inspection/Project Description

EPA Inspectors contacted BCRRC on Thursday, August 4, 2022, and spoke with Jerome Sheehan. During the call, EPA notified BCRRC that EPA planned to conduct Surface Emission Monitoring at the time of the onsite inspection and requested that BCRRC contact their surface monitoring contractor so they can be present during the inspection.

On August 9, 2022, EPA Inspectors Victor Tu, Phil Ritz, Harish Patel, Supriya Rao, and Omer Sohail arrived at BCRRC's offices in Columbus, NJ at approximately 9:30 AM. We were met in their conference rooms by Jerome Sheehan. At a conference room in the Rutgers University Campus building, the EPA inspectors were joined by Joseph Hilla, and Laurie Van Gerderen from BCRRC, and Eric Petersen, BCRRC's outside consultant, from SCS Engineers.

Inspector Tu explained that the purpose of EPA's inspection was to conduct surface emissions monitoring (SEM) of the landfill surface, and also to observe any staff or contractors who perform routine surface emissions monitoring and data management. EPA had announced this inspection and had requested that the SEM contractor (SCS Engineers) be available for the inspection. SCS representative indicated that the SEM technicians were not available.

During the opening meeting, Mr. Sheehan gave the team an overview of the landfill. The entire site occupies about 522 acres, but the landfill covers only 200 acres. BCRRC has basically 2 landfills –Landfill 1 which started accepting waste in 1989 and was capped in 2001 and Landfill 2 which started accepting waste in 1999. In 2015, BCRRC started filling in the "wedge" between the two landfills. The landfill is owned by Burlington County, but it is operated by Waste Management Inc. Municipal waste is collected from the county. BCRRC also receives mixed wood, which is ground and used as daily cover, together with dirt, glass cullet. No auto fluff is used for daily cover.

BCRRC has installed a GCCS to collect the landfill gas (LFG). In the past, BCRRC collected the gas and generated electricity. Currently, BCRRC does not operate any engines (they have been removed), and all collected LFG has been flared in 3 flares on-site as of June 2020. The LFG is not treated before flaring.

- The LFG energy plant started-up in 2008. In June 2020, the energy plant was shut down due to economics. Also, siloxane buildup on the engines was a concern. Although the LFG energy plant is not operating, the former company is "paying" BCRRC for the LFG collected, and also providing "free" electricity to the Landfill.
- Operates two (2) enclosed flares and one (1) candle-stick flare; all three flares operate at the same time and are permitted to operate 8760 hours. All three flares were performance tested about 15 years ago.
- Has 5 blowers –only 4 currently being used
- Two (2) condensate knock out pots –one each for each landfill cell.
- No temp exceedances monitored at the wellheads

- Some wells are flooded with water
- The leachate from the landfill is gravity-drained by a leachate collection system and stored in a 1-million-gallon tank. The leachate is not treated on-site. The leachate plant was closed in 1996. BCRRC trucks out approx. 130,000 gals/day of leachate and spends about $ 2.0 million per year to ship the leachate off-site. Leachate is sent to Mt Holly WWTP or Florence WWTP.

Mr Petersen from SCS Engineers explained how they conduct quarterly SEM at the landfill. He also mentioned that the SCS technicians who conduct SEM were not available for the EPA inspection this week. EPA could not oversee any monitoring equipment calibration observations. Any leaks identified by the contractor are noted and flagged to BCRRC personnel. All repairs are done by BCRRC and re-monitored by SCS Engineers.

At about 11:00 AM the EPA team began LDAR monitoring on the Landfill and continued after lunch. Numerous leaks were discovered by the team. The locations and leak concentrations were provided to BCRRC and SCS personnel. We left the facility around 4:00 PM.

On August 10, 2022, the EPA inspectors arrived at BCRRC at around 8:45 AM. After a quick recap of the plan for the day, we began SEM of the wellheads. On the south side of Landfill, a significant portion of the top cover had washed away during some recent heavy rainstorms in May and June 2022. BCRRC personnel explained that they were working on repairs and would be completed by 8/13/2022.

Also observed some operating data from the three flares. CD-1 (smaller flare) –1699 degrees F; CD-3 (larger flare) –1708 degrees F. The gas flows to each of the flares was as follows: CD-1 –306 scfm; CD-3 –1720 scfm; and CD-8 –954 scfm. During the inspection the candle stick flare stop operating for a few minutes. EPA inspectors noticed this while observing the flare using the FLIR camera.

The team then proceeded to the conference room for a close-out meeting. During our closing meeting we requested the following documents:

1. The last stack test report for CD-1 and CD-3
2. Manufacturer's specs for candlestick flare (CD-8).
3. Wellhead GEM monitoring data for the past 2 years
4. Leachate Generation/Recirculation Records for the past 2 years
5. Flare operation data including flowrate, and temperature records for the past 2 years
6. Quarterly Surface Emission Monitoring Report for the past 2 years
7. SEM Re monitoring and Repair Records for the past 2 years
8. Documentation pertaining the cover collapse, i.e., Report to NJ, SEM on the surface, corrective action plan, etc.

At the closing meeting, EPA Inspectors indicated that the leaks would need to be repaired and re-monitored as required by the regulations. The list of leaks identified will be provided to BCRRC via email. It was agreed at the closing meeting that required timeframe of the response to repair the leaks identified by EPA will start upon the receipt of EPA's Exceedance Report.

The EPA inspectors left the facility around 1:00 PM.

United States Environmental Protection Agency
2890 Woodbridge Avenue, Edison, NJ 08837
Monitoring and Assessment Branch
Surface Emissions Monitoring - Leak Detection and Repair

Burlington County Landfill/Burlington County Resource Recovery Complex
22000 Burlington-Columbus Road, Mansfield Twp, Burlington County, NJ

Date of Inspection: August 9-10, 2022
Weather: August 9: 86° F, Sunny, Wind 7 MPH, Visibility - 10 miles, perfectly clear
August 10: 83° F, Sunny, Wind 5 MPH, Visibility - 10 miles, perfectly clear

Sample ID	Concentration (ppm)	Location of Sample	Latitude	Longitude	Notes/Comments
Downwind at Rutgers Eco complex	2.4	Ambient	40.07835	-74.75594	
Upwind near engine building	0.9	Ambient	40.07232727	-74.77061988	
Background on top of landfill	11.2	Ambient	40.07352654	-74.76564823	
31	30 14 15.3	Valve Base Flange	40.07330206	-74.76561864	
Background on side slopes	37	Ambient	40.07298031	-74.76570339	
Landfill cover pulled up	2500	Ground	40.07301003	-74.76568846	
CW 30	50000	Base	40.07277346	-74.76557867	Cover is popped up
Leachate breakout	1700	Base	40.07259096	-74.76603651	
23	3.5	Base	40.07264758	-74.7664417	
11	36000 300 5500	Base Valve Hose connection	40.07281281	-74.76761737	
12	2.7	Base	40.07259425	-74.76899407	
Leachate near well 12	20.7	Base	40.07341711	-74.7674863	
Well 13A	2.9	Base	40.07329066	-74.76882904	
2W19	16.7	Base	40.07410862	-74.76669439	
Well 20	1700	Base	40.07683316	-74.76749677	
W27	3200 1600	Connector to Valve base Base	40.07485346	-74.7660832	
W63	1900	Base	40.07540954	-74.76591926	
W21	62000	Base	40.07518068	-74.76638177	
W28	10.5 3.7 17 94	Base Connection Connector base Valve	40.0760287	-74.75958287	
Background @ edge of excavation	19.5	Ambient	40.0761811	-74.75986648	
W29A	14.1 72 10.7	Valve Base Connector	40.07653197	-74.75958374	
Leachate clean out port	6.5	Base	40.07665049	-74.75960819	
EW 34	34 27	Valve Connector	40.07657434	-74.75902556	Missing sample port plug
EW38	3.4	Valve	40.076435	-74.75842248	
EW30	250 14.6	Connector Base	40.07713841	-74.75963371	
25A	98	Base	40.07727898	-74.7602282	
W25	174 28	Connection Valve	40.0772968	-74.76022173	
Leachate clean out port	191 73	Flange Base	40.07734185	-74.7601788	
W24	17000	Base	40.07672547	-74.76028385	
W23	900 900	Base Valve	40.07604058	-74.76029448	
EW22A	680 18	Base Valve	40.0753873	-74.7602519	
21A	8.2 3.3	Base Valve	40.07474416	-74.76022316	
26A	13.6 7.5	Flange Valve	40.07485989	-74.75959775	
31	1.3	Flange	40.07501738	-74.75899975	
Leachate collector	0.4	Base	40.07478726	-74.75721484	
Leachate collector	2.4	Base	40.0744058	-74.75772585	

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Sample ID	Concentration (ppm)	Location of Sample	Latitude	Longitude	Notes/Comments
Leachate collector	0.2	Base	40.07422516	-74.75828499	
Manhole near phase 6	1400	Base	40.07355619	-74.76327016	
Side slope near leachate collection near landslide	9000	Ground	40.07363518	-74.76351641	
Leachate breakout near landslide	300	Ground	40.07364999	-74.76321623	
Manhole near compressor station	0	Across the manhole cover	40.06809359	-74.77280964	
Pump station	0.4	Base	40.07196398	-74.76685949	
Leachate pipe	0.3	Base	40.07205131	-74.76723221	
Flange on opposite street to flare	0.2	Flange	40.07217509	-74.76827502	
Surface	5570	Ground	40.07623372	-74.76493173	
EW-2W69	2561	Base	40.0760948	-74.76490565	
Surface	1580	Ground	40.07611853	-74.76492317	
EW-2W66	5024	Base	40.07568293	-74.7649492	
SC-06	1906	Base	40.07564612	-74.76428015	
SC-05	88.8	Base	40.0763586	-74.76403475	
2W-79	16000	Base	40.07638925	-74.76418493	
Surface	1666	Ground	40.07627241	-74.76404826	
83	16300	Base	40.07701679	-74.76395932	
Surface	1164	Ground	40.07692342	-74.76409652	
W84	15200	Base	40.07755718	-74.76393882	
Vacuum riser	2184	Base	40.07755542	-74.7639093	
W82	2081	Base	40.07737398	-74.76459041	
W75	4536	Base	40.07722706	-74.76523277	
Vacuum riser	25.4	Base	40.07720824	-74.76521173	
W73	10600	Base	40.07682656	-74.76554443	
Surface pipe sticking out of ground	1857	Top of pipe	40.07673919	-74.76558838	Visible emissions
W71	1197	Base	40.07643637	-74.76549369	
W68	10300 1318	Base Connector	40.0760898	-74.76543877	
W65	86.4	Base	40.075609	-74.76556	
W63	10900	Base	40.07671	-74.765925	
W67	246	Base	40.07540596	-74.76598096	
Surface	1145	Ground	40.07540596	-74.76598096	
Leachate clean out	26.6 140	Flange Base	40.07535083	-74.7659589	
Gas cover LFG Flange	15900 3.4	Ground Flange	40.07535083 40.0699781	-74.7659589 -74.773066	

Table 1, EPA's Exceedance Report

Lead Inspector's Name: Victor Tu

10/26/2022

X Victor Tu

Lead Inspector
Signed by: VICTOR TU

Assisting Inspector's Name: Phillip Ritz

10/26/2022

X Phillip Ritz

Assisting Inspector
Signed by: PHILLIP RITZ

Supervisor's Name: Harish Patel

10/26/2022

X Harish Patel

Supervisor
Signed by: Environmental Protection Agency